

# Curriculum



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Cognome Surname:	BERGANTINI

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## **POSIZIONE PROFESSIONALE ATTUALE / CURRENT PROFESSIONAL POSITION:**

Posizione attuale Current position:	In Servizio
Qualifica Qualification:	Ricercatore a t.d. - t.pieno (art. 24 c.3-a L. 240/10)
Ateneo/Ente/Azienda University/Institution/Company:	Università degli Studi di SIENA
Nazione Ateneo/Ente/Azienda University/Institution/Company Country:	ITA
Anno inizio Start Year:	2022
Anno fine End Year:	2026

## **PRECEDENTI ESPERIENZE LAVORATIVE (ULTIMI 10 ANNI) / PREVIOUS WORK EXPERIENCE ( LAST 10 YEARS):**

Qualifica Qualification:	Ricercatore a t.d. - t.pieno (art. 24 c.3-a L. 240/10)
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Ateneo/Ente/Azienda University/Institution/Company	Università degli Studi di SIENA
Posizione Sede Lavorativi (indicare Nazione e Città) Workplace Location (specify Country and City):	Siena, SI, Italia
Anno inizio Start Year:	2022
Anno fine End Year:	2026
Descrizione Description:	

### **LINGUE / LANGUAGES:**

Lingua Language:	Italiano
Scrittura Writing:	madrelingua
Comunicazione Communication:	madrelingua

Lingua Language:	Inglese
Scrittura Writing:	C1
Comunicazione Communication:	B2

### **AREA/SETTORE SCIENTIFICO-DISCIPLINARE / AREA/SECTOR SCIENTIFIC-DISCIPLINARY**

Area scientifico-disciplinare Area scientific-disciplinary:	Scienze mediche
Area scientifico-disciplinare codice Area scientific-disciplinary code:	06
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-Scienze tecniche di medicina di laboratorio
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-MEDS-26/A

### **DESCRIZIONE DEI PRINCIPALI RISULTATI SCIENTIFICI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 PUBBLICAZIONI) / DESCRIPTION OF THE MAIN SCIENTIFIC RESULTS ACHIEVED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 PUBLICATIONS):**

<p>Descrizione Description:</p>	<p><i>During my PhD, I investigated the altered phenotypes of NK and T cells in the airway's inflammation. I also investigated the changes of these cells before and after treatment with anti-IL-5 monoclonal antibodies (moAbs). From our data, NK cell activity resulted impaired in severe eosinophilic asthmatic patients, with less cytotoxic activity and reduced mature phenotypes CD56dimCD16br NK subsets. After the administration of anti-IL-5αR NK cells shifted towards maturity and improved their capacity to release cytotoxic mediators responsible for apoptosis. The proliferative potential and activation status of NK cells was evaluated via expression of CD137. Our data also sustains the role of CD137 expression for activation of ADCC in patients with severe asthma. Our findings demonstrated that anti IL-5 induces expression of CD137 on activated NK cells and this may favour apoptosis of eosinophils (Bergantini L, 2023, <a href="https://doi.org/10.1016/j.clim.2023.109680">https://doi.org/10.1016/j.clim.2023.109680</a>). It was demonstrated an high degree of impairment of regulatory T cells compartments in terms of percentage and exhaustion state (evaluated via expression of PD-1 and other checkpoint inhibitors) in samples from patients with severe uncontrolled asthma. The rebalancing of T cells subsets induced by the IL-5 blockade was demonstrated after 24 months of treatment. Treg cells showed a progressively decreased expression of T exhaustion marker PD-1, allowing the regulatory compartment to explicate more efficiently its immunomodulatory functions (Bergantini, L., 2023, <a href="https://doi.org/10.1016/j.biopha.2023.115385">https://doi.org/10.1016/j.biopha.2023.115385</a>). T cell compartment was also modulated by IL-25 and IL-33. The epithelial cell alarmins IL-25 and IL-33 can orchestrate immune cell functions that drive pathological responses in the asthmatic airways. They were involved in the regulation of Intercellular Adhesion Molecules (ICAMs). Our studies demonstrated that ICAM-1, considered a trigger for T cell activation, and the receptor for the major group of rhinoviruses, was upregulated in these patients before treatment with moAbs. It was also reported a downregulation of ICAM-3 on Th2 cells which providing a limitation in the interaction of Th2 cells with DC in favour of Treg cell adhesion, able to modulate inflammation after drugs administration (data under review).</i></p>
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## **PUBBLICAZIONI / PUBLICATIONS:**

<p>Anno della pubblicazione Year of publication:</p>	<p>2023</p>
<p>Citazione Citation:</p>	<p>Bergantini L, Pianigiani T, d'Alessandro M, Gangi S, Cekorja B, Bargagli E, Cameli P. The effect of anti-IL5 monoclonal antibodies on regulatory and effector T cells in severe eosinophilic asthma. Biomed Pharmacother. 2023 Oct; ISSN: 1950-6007</p>

Anno della pubblicazione Year of publication:	2023
Citazione Citation:	Bergantini L, d'Alessandro M, Pianigiani T, Cekorja B, Bargagli E, Cameli P. Benralizumab affects NK cell maturation and proliferation in severe asthmatic patients. Clin Immunol. 2023 Aug;ISSN: 1521-7035

Anno della pubblicazione Year of publication:	2023
Citazione Citation:	Bergantini L, d'Alessandro M, Del Zotto G, Marcenaro E, Bargagli E. Characterization of natural killer and T cells in bronchoalveolar lavage and peripheral blood of sarcoidosis patients. Front Immunol. 2023 Jan 4.; ISSN:1664-3224

Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Bergantini L, d'Alessandro M, Cameli P, Cavallaro D, Gangi S, Cekorja B, Sestini P, Bargagli E. NK and T Cell Immunological Signatures in Hospitalized Patients with COVID-19. Cells. 2021 Nov 15; ISSN: 2073-4409

Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Bergantini L, d'Alessandro M, Cameli P, Otranto A, Finco T, Curatola G, Sestini P, Bargagli E. Prognostic role of NK cell percentages in bronchoalveolar lavage from patients with different fibrotic interstitial lung diseases. Clin Immunol. 2021 Sep;ISSN:1521-7035

Anno della pubblicazione Year of publication:	2019
Citazione Citation:	Bergantini L, Cameli P, d'Alessandro M, Vagaggini C, Refini RM, Landi C, Pieroni MG, Spalletti M, Sestini P, Bargagli E. NK and NKT-like cells in granulomatous and fibrotic lung diseases. Clin Exp Med. 2019 Nov;ISSN:1591-9528

Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Bergantini, L., d'Alessandro, M., Cameli, P., Pianigiani, T., Fanetti, M., Sestini, P., & Bargagli, E. (2021). Follicular T Helper and Breg Cell Balance in Severe Allergic Asthma Before and After Omalizumab Therapy. Molecular diagnosis & therapy, 25(5), 593-605. <a href="https://doi.org/10.1007/s40291-021-00545-3">https://doi.org/10.1007/s40291-021-00545-3</a> ISSN:1179-2000

Anno della pubblicazione Year of publication:	2020
Citazione	d'Alessandro M, Carleo A, Cameli P, Bergantini L, Perrone A, Vietri L, Lanzarone N, Vagaggini C,

Citation:	Sestini P, Bargagli E. BAL biomarkers' panel for differential diagnosis of interstitial lung diseases. Clin Exp Med. 2020 May;20(2):207-216. doi: 10.1007/s10238-020-00608-5. Epub 2020 Jan 22. Clin Exp Med. 2020 May ISSN:1591-9528
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Anno della pubblicazione Year of publication:	2022
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Citazione Citation:	Vantaggiato, L., Cameli, P., Bergantini, L., d'Alessandro, M., Shaba, E., Carleo, A., Di Giuseppe, F., Angelucci, S., Sebastiani, G., Dotta, F., Bini, L., Bargagli, E., & Landi, C. (2022). Serum Proteomic Profile of Asthmatic Patients after Six Months of Benralizumab and Mepolizumab Treatment. Biomedicines, 10(4), 761. <a href="https://doi.org/10.3390/biomedicines10040761">https://doi.org/10.3390/biomedicines10040761</a> ISSN:2227-9059
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Anno della pubblicazione Year of publication:	2024
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Citazione Citation:	Pianigiani, T., Paggi, I., Cooper, G. E., Staples, K. J., McDonnell, M., & Bergantini, L. (2025). Natural killer cells in the lung: novel insight and future challenge in the airway diseases. ERJ open research, 11(2), 00683-2024. <a href="https://doi.org/10.1183/23120541.00683-2024">https://doi.org/10.1183/23120541.00683-2024</a>
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**DESCRIZIONE DEI PRINCIPALI PROGETTI DI RICERCA E PREMI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PRINCIPAL INVESTIGATOR O COORDINATORE LOCALE DI PROGETTI DI RICERCA COMPETITIVI NAZIONALI O INTERNAZIONALI, SIGNIFICATIVI PREMI CONSEGUITI PER LA PROPRIA ATTIVITÀ DI RICERCA)/ DESCRIPTION OF THE MAIN RESEARCH PROJECTS AND AWARDS AWARDED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 ACHIEVEMENTS, INCLUDING, FOR EXAMPLE, PRINCIPAL INVESTIGATOR OR LOCAL COORDINATOR OF NATIONAL OR INTERNATIONAL COMPETITIVE RESEARCH PROJECTS, SIGNIFICANT AWARDS AWARDED FOR YOUR RESEARCH ACTIVITY):**

Descrizione Description:	AWARDS 2019- TRAVEL GRANT AWARD 3° National congress of "SIBIOC" 2019 Rome, Italy 2020- RESEARCH AWARD from "Profondi Respiri Onlus" society, Italy 2021-ERS YOUNG SCIENTIST SPONSORSHIP 2021, from ERS, Barcelona, Spain 2022 EDUCATIONAL GRANT for young researcher for National congress of "SIBIOC" 2022, Genova, Italy 17/12/2022- 17/6/2024 RESEARCH AWARD from "UN SOFFIO DI SPERANZA. IL SOGNO DI EMANUELA ONLUS", Italy 2023- TRAVEL GRANT AWARD for Guest Editor for "LIFE" MDPI journal, for participating to ERS International Congress
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	<p>2023 in Milan, Italy 2024- ERS Early Career Editorial Team mentoring programme winner, with the role as a young editor member of European respiratory journal (ERJ) IF: 17 2025- BEST SELECTED CONTRIBUTION for 23rd EAACI Immunology Winter School on Basic Immunology Research in Allergy and Clinical Immunology, Austria Foreign Internship and International Collaboration: - 01/10/2019-31/12/2019 Internship at Medizinische Hochschule Hannover, Germany Prof. Antje Prasse. - 17-10-2019- 17/10/2024 Participation in the international research project funded by the European Union (EU) "Human Exposomic Determinants of Immune Mediated Diseases (HEDIMED)" Asthma Consortium - University of Siena.</p> <p><a href="https://www.hedimed.eu/partners/">https://www.hedimed.eu/partners/</a> - Collaboration in the GEN-COVID Study multidisciplinary research group. <a href="https://sites.google.com/dbm.unisi.it/gen-covid/participants/elena-bargagli?authuser=0">https://sites.google.com/dbm.unisi.it/gen-covid/participants/elena-bargagli?authuser=0</a> - 10/2020-10/2023 Participation in the HIDE-IPF project (EPIGENETIC AND PROTEOMIC APPROACHES TOWARDS INNOVATIVE TARGETED THERAPIES FOR IDIOPATHIC PULMONARY FIBROSIS), funded by the Tuscany Region, 2018 Health Research Call - DD 8245.</p> <p><a href="https://www.dbcf.unisi.it/it/ricerca/progetti-nazionali/progetti-nazionali-corso">https://www.dbcf.unisi.it/it/ricerca/progetti-nazionali/progetti-nazionali-corso</a> - 01-07-2023 to 30-06-2024 Participation in the research project as sub-investigator, co-financed by CHIESI FARMACEUTICI, entitled: "CHARACTERIZATION CELLULAR IMMUNOLOGY OF POTENTIAL ANTIFIBROTIC MOLECULES IN CELL LINES OF PATIENTS AFFECTED BY IDIOPATHIC LUNG FIBROSIS"</p>
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Descrizione Description:	2021- ERS YOUNG SCIENTIST SPONSORSHIP 2021, from ERS, Barcelona, Spain
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Descrizione Description:	2023- TRAVEL GRANT for Guest Editor for "LIFE" MDPI journal, for participating to ERS International Congress 2023 in Milan, Italy
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Descrizione Description:	2022 Human Exposomic Determinants of Immune Mediated Diseases (HEDIMED)" Consortium for Asthma -University of Siena ( <a href="https://www.hedimed.eu/partners/">https://www.hedimed.eu/partners/</a> )- local coordinator
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Descrizione Description:	2025- Principal Investigator progetto " harnessing the impact of tezepelumab in patients affected by severe uncontrolled asthma in response to viral infection and allergen stimulation (HYPE)"
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**DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SVILUPPO DI RETI E RELAZIONI SCIENTIFICHE NAZIONALI E INTERNAZIONALI (CON ANNESSO**

**ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PARTECIPAZIONE O ORGANIZZAZIONE DI CONVEGNI NAZIONALI E INTERNAZIONALI; CONTRIBUTI A CONSORZI DI RICERCA) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF DEVELOPMENT OF NATIONAL AND INTERNATIONAL SCIENTIFIC NETWORKS AND RELATIONS (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, PARTICIPATION OR ORGANIZATION OF NATIONAL AND INTERNATIONAL CONFERENCES; CONTRIBUTIONS TO RESEARCH CONSORTIA):**

Descrizione Description:	
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Descrizione Description:	Collaboration: - G. Del Zotto, flow cytometry, IRCCS G. Gaslini, Italy - S. Sivori, NK cell biology, Gneova University, Italy - A. Prasse, cellular models in lung diseases, Hannover Medical School, Germany - J. Sellares, biomarker in lung diseases, Hospital Clinic de Barcelona, Spain - E. Renzoni, treatments in lung diseases, IRoyal Brompton Hospital, London, UK
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Descrizione Description:	- 2023 FACULTY MEMBER of the congress "II CONGRESSO NAZIONALE SULLA DIAGNOSI E CURA DELLA SARCOIDOSI PARADIGMI MULTIDISCIPLINARI NELLA RICERCA, DIAGNOSI E CURA" Italy - 2023 FACULTY MEMBER of the congress "LA TRASVERSALITÀ DELLA RICERCA: la rete delle Università in Toscana tra presente e futuro", PISA, Italy
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**DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SUPPORTO ALLA COMUNITÀ SCIENTIFICA (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, RESPONSABILITÀ DI DIREZIONE DI COMITATI EDITORIALI; INCARICHI DI VALUTAZIONE DELLA RICERCA PRESSO ISTITUZIONI NAZIONALI O INTERNAZIONALI; RESPONSABILITÀ ISTITUZIONALI ALL'INTERNO DELL'ISTITUZIONE DI APPARTENENZA O DI ALTRE ISTITUZIONI) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF SUPPORT TO THE SCIENTIFIC COMMUNITY (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, MANAGEMENT RESPONSIBILITIES OF EDITORIAL COMMITTEES; RESEARCH EVALUATION ROLES AT NATIONAL OR INTERNATIONAL INSTITUTIONS; INSTITUTIONAL**

**RESPONSIBILITIES WITHIN THE INSTITUTION OF AFFILIATION OR OTHER INSTITUTIONS):**

Descrizione Description:	
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Descrizione Description:	REVIEWING ACTIVITIES: 2021-2023 GUEST EDITOR Special Issue "Advances in Theranostic Biomarkers in Lung Diseases" "LIFE", MDPI 2021- now ACADEMIC EDITOR "Disease Markers" , Wiley 2021- now TOPICAL ADVISORY PANEL MEMBER "LIFE" , MDPI 2022-2024 GUEST EDITOR Special Issue "Thoracic Malignancies: From Prevention and Diagnosis to Late Stages" "LIFE", MDPI 2022- GUEST EDITOR Special Issue "Molecular and Cellular Research on Rare Lung Diseases" "Biomedicines", MDPI 2024- now Editorial Board member "Life", MDPI 2024- now Editorial Board member "European Respiratory Journal" 2022- now Scientific Evaluation for Czech health research council 2024- now REVIEWER of abstract for ERS congress 2024/2025
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Descrizione Description:	MEMBERSHIPS OF SCIENTIFIC SOCIETIES: 2018- now Member of ISCCA (Italian Society for Clinical Cell Analysis) 2018- now Member of ESCCA, (European Society of Clinical Cell Analysis) 2020 - now Member of GIC (Italian society of Cytometry) 2020 - now Member of ERS, (European Respiratory Society) 2020 - now Member of SIP (Italian Society of Pneumology) 2022- now Member of IES (International Eosinophil Society) 2024 - now Member of EAACI (European Society of Allergy and Clinical Immunology)
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**DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI VALORIZZAZIONE DELLE CONOSCENZE (CON ANNESSO ELENCO DI MASSIMO 3 RISULTATI, RELATIVI ALLA PARTECIPAZIONE DEL CANDIDATO ALLE ATTIVITÀ DI VALORIZZAZIONE DELLE CONOSCENZE) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF KNOWLEDGE VALORIZATION (WITH ATTACHED LIST OF MAXIMUM 3 RESULTS, RELATING TO THE CANDIDATE'S PARTICIPATION IN KNOWLEDGE VALORIZATION ACTIVITIES):**

Descrizione Description:	
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**Informazioni aggiornate alla data di candidatura 29-05-2025**

**LAURA BERGANTINI**

*Il presente curriculum costituisce allegato e parte integrante dell'incarico sottoscritto*

